- Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee and Virginia.
- Arkansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.
- California.
- 7. Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington and Wyoming.
- 8. Michigan, Ohio and West Virginia.
- 9. Illinois, Indiana and Wisconsin.
- 10. Colorado, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota
- 11. Alaska.
- 12. Caribbean Insular areas.
- Hawaii and Pacific Insular areas.

PART 101—FIXED MICROWAVE **SERVICES**

Subpart A—General

Scope and authority. 101.1

101.3 Definitions.

Subpart B—Applications and Licenses

GENERAL FILING REQUIREMENTS

- 101.4 Transition plan.
- 101.5 Station authorization required.
- 101.7 Eligibility for station license.
- 101.17 Performance requirements for the 38.6-40.0 GHz frequency band.
- 101.21 Technical content of applications.
- 101.23 Waiver of rules. 101.31 Temporary and conditional authorizations.

PROCESSING OF APPLICATIONS

- 101.45 Mutually exclusive applications.
- 101.51 Comparative evaluation of mutually exclusive applications.

LICENSE TRANSFERS, MODIFICATIONS, CONDITIONS AND FORFEITURES

- 101.55 Considerations involving transfer or assignment applications.
- 101.56 Partitioned service areas (PSAs) and disaggregated spectrum.
- 101.61 Certain modifications not requiring prior authorization in the Local Multipoint Distribution Service and 24 GHz Service.
- 101.63 Period of construction; certification of completion of construction.
- 101.64 Service areas.
- 101.65 Forfeiture and termination of station authorizations
- 101.67 License period.

POLICIES GOVERNING MICROWAVE RELOCATION From the 1850-1990 and 2110-2200 MHz Bands

101.69 Transition of the 1850-1990 MHz. 2110-2150 MHz, and 2160-2200 MHz bands from

- the fixed microwave services to personal communications services and emerging technologies.
- 101.71 Voluntary negotiations.
- 101.73 Mandatory negotiations.
- 101.75 Involuntary relocation procedures.
- 101.77 Public safety licensees in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands
- 101.79 Sunset provisions for licensees in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands.
- 101.81 Future licensing in the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands.
- 101.82 Reimbursement and relocation expenses in the 2110-2150 MHz and 2160-2200 MHz bands.

POLICIES GOVERNING FIXED SERVICE RELOCATION FROM THE 18.58-19.30 GHz BAND

- 101.83 Modification of station license
- 101.85 Transition of the 18.58-19.3 GHz band from the terrestrial fixed services to the fixed-satellite service (FSS).
- 101.89 Negotiations.
- 101.91 Involuntary relocation procedures.
- 101.95 Sunset provisions for licensees in the 18.58-19.30 GHz band.
- 101.97 Future licensing in the 18.58-19.30 GHz band.

Subpart C—Technical Standards

- 101.101 Frequency availability.
- 101.103 Frequency coordination procedures.
- Interference protection criteria. 101.105
- 101.107 Frequency tolerance.
- 101.109 Bandwidth.
- 101.111 Emission limitations.
- 101.113 Transmitter power limitations.
- 101.115 Directional antennas.
- 101.117 Antenna polarization.
- 101.119 Simultaneous use of common antenna structures
- 101.125 Temporary fixed antenna height restrictions.
- 101.129 Transmitter location.
- 101.131 Transmitter construction and installation.
- 101 133 Limitations on use of transmitters
- 101.135 Shared use of radio stations and the offering of private carrier service.
- 101.137 Interconnection of private ational fixed point-to-point microwave
- 101.139 Authorization of transmitters.
- 101.141 Microwave modulation.
- 101.143 Minimum path length requirements.
- 101.145 Interference to geostationary-satellites.
- 101.147 Frequency assignments.
- 101.149 Special requirements for operation in the band 38,600-40,000 MHz.
- 101.151 Use of signal boosters.

Pt. 101

Subpart D—Operational Requirements

- 101.201 Station inspection.
- 101.203 Communications concerning safety of life and property.
- 101.205 Operation during emergency.
- 101.207 Suspension of transmission.
- 101.209 Operation of stations at temporary fixed locations for communication between the United States and Canada or Mexico.
- 101.211 Operator requirements.
- 101.213 Station identification.
- 101.215 Posting of station authorization and transmitter identification cards, plates, or signs.
- 101.217 Station records.

Subpart E-Miscellaneous Common Carrier **Provisions**

- 101.301 National defense; free service.
- 101 303 Answers to notices of violation.
- 101.305 Discontinuance, reduction or impairment of service.
- 101.307 Tariffs, reports, and other material required to be submitted to the Commission.
- 101.309 Requirement that licensees respond to official communications.
- 101.311 Equal employment opportunities.

Subpart F—Developmental Authorizations

- 101.401 Eligibility.
- 101.403 Scope of service.
- 101.405 Adherence to program of research and development.
- 101.407 Special procedure for the development of a new service or for the use of frequencies not in accordance with the provisions of the rules in this part.
- 101.409 Terms of grant; general limitations. 101.411 Supplementary showing required.
- 101.413 Developmental report required.

Subpart G—24 GHz Service and Digital **Electronic Message Service**

- 101.501 Eligibility.
- 101.503 Digital Electronic Message Service Nodal Stations.
- 101.505 Frequencies.
- 101.507 Frequency stability.
- 101.509 Interference protection criteria.
- 101.511 Permissible services.
- 101.513 Transmitter power.
- 101.515 Emissions and bandwidth.
- 101.517 Antennas.
- 101.519 Interconnection.
- 101.521 Spectrum utilization.
- 101.523 Service areas.
- 101.525 24 GHz system operations.
- 101.526 License term.
- 101.527 Construction requirements for 24 GHz operations.
- 101.529 Renewal expectancy criteria for 24 GHz licenses.

47 CFR Ch. I (10-1-04 Edition)

- [Reserved] 101.531
- 101.533 Regulatory status.
- 101.535 Geographic partitioning and spectrum aggregation/disaggregation.
- 101.537 24 GHz band subject to competitive bidding.
- 101.538 Designated entities.

Subpart H—Private Operational Fixed Point-to-Point Microwave Service

- 101.601 Eligibility.
- 101.603 Permissible communications.

Subpart I—Common Carrier Fixed Point-to-**Point Microwave Service**

- 101.701 Eligibility.
- 101.703 Permissible communications.
- 101.705 Special showing for renewal of common carrier station facilities using frequency diversity.

Subpart J—Local Television Transmission Service

- 101.801 Eligibility.
- Frequencies. 101.803
- 101.805 Assignment of frequencies to mobile stations.
- 101.807 Transmitter power.
- 101.809 Bandwidth and emission limitations.
- 101.811 Modulation requirements.
- Remote control operation of mobile 101.813 television pickup stations.
- 101.815 Stations at temporary fixed locations
- 101.817 Notification of station operation at temporary locations.
- 101.819 Stations affected by coordination contour procedures.

Subpart K [Reserved]

Subpart L—Local Multipoint Distribution Service

- 101.1001 Eligibility.
- 101.1005 Frequencies available.
- 101.1007 Geographic service areas and number of licenses.
- 101.1009 System operations.
- 101.1011 Construction requirements and criteria for renewal expectancy.
- 101.1013 Permissible communications serv-
- 101.1017 Requesting regulatory status.

Subpart M—Competitive Bidding **Procedures for LMDS**

- 101.1101 LMDS service subject to competitive bidding.
- 101.1102-101.1105 [Reserved]
- 101.1107 Bidding credits for very small businesses, small businesses and entrepreneurs

Federal Communications Commission

- 101.1109 Records maintenance.
- 101.1110 [Reserved]
- 101.1111 Partitioning and disaggregation.
- 101.1112 Definitions.

Subpart N—Competitive Bidding Procedures for the 38.6–40.0 GHz Band

- 101.1201 38.6–40.0 GHz subject to competitive bidding.
- 101.1202-101.1207 [Reserved]
- 101.1208 Bidding credits for small businesses.
- 101.1209 Definitions.

Subpart O-Multiple Address Systems

GENERAL PROVISIONS

- 101.1301 Scope.
- 101.1303 Eligibility.
- 101.1305 Private internal service.
- 101.1307 Permissible communications.
- 101.1309 Regulatory status.

SYSTEM LICENSE REQUIREMENTS

- 101.1311 Initial EA license authorization.
- 101.1313 License term.
- 101.1315 Service areas
- 101.1317 Competitive bidding procedures for mutually exclusive MAS EA applications.
- 101.1319 Competitive bidding provisions.
- 101.1321 License transfers.
- 101.1323 Spectrum aggregation, disaggregation, and partitioning.

SYSTEM REQUIREMENTS

- 101.1325 Construction requirements.
- 101.1327 Renewal expectancy for EA licensees.
- 101.1329 EA Station license, location, modifications.
- 101.1331 Treatment of incumbents.
- 101.1333 Interference protection criteria.

Subpart P—Multichannel Video Distribution and Data Service Rules for the 12.2– 12.7 GHz Band

- 101.1401 Service areas.
- 101.1403 Broadcast carriage requirements.
- 101.1405 Channeling plan.
- 101.1407 Permissible operations for MVDDS.
- 101.1409 Treatment of incumbent licensees.
- 101.1411 Regulatory status and eligibility. 101.1412 MVDDS eligibility restrictions for
- cable operators.

 101.1413 License term and renewal expect-
- ancy.
- 101.1415 Partitioning and disaggregation.
- 101.1417 Annual report.
- 101.1421 Coordination of adjacent area MVDDS stations.
- 101.1423 Canadian and Mexican coordination.
- 101.1425 RF safety.

- 101.1427 MVDDS licenses subject to competitive bidding.
- 101.1429 Designated entities.
- 101.1440 MVDDS protection of DBS

Subpart Q—Service and Technical Rules for the 70/80/90 GHz Bands

- 101.1501 Services areas.
- 101.1505 Segmentation plan.
- 101.1507 Permissible operations.
- 101.1511 Regulatory status and eligibility.
- 101.1513 License term and renewal expectancy.
- 101.1523 Sharing and coordination among non-government licensees and between non-government and government services.
- 101.1525 RF safety.
- 101.1527 Canadian and Mexican coordination.

AUTHORITY: 47 U.S.C. 154, 303.

SOURCE: 61 FR 26677, May 28, 1996, unless otherwise noted.

Subpart A—General

§101.1 Scope and authority.

- (a) Part 1 of the Commission's rules contains the general rules of practice and procedure applicable to proceedings before the Commission and for the filing of applications for radio station licenses in the fixed microwave services.
- (b) The purpose of the rules in this part is to prescribe the manner in which portions of the radio spectrum may be made available for private operational, common carrier, 24 GHz Service and Local Multipoint Distribution Service fixed, microwave operations that require transmitting facilities on land or in specified offshore coastal areas within the continental shelf.
- (c) The rules in this part are issued pursuant to the authority contained in Titles I through III of the Communications Act of 1934, as amended, which vest authority in the Federal Communications Commission to regulate common carriers of interstate and foreign communications, to regulate radio transmissions and issue licenses for radio stations, and to regulate all interstate and foreign communications

§ 101.3

by wire and radio necessary to the accomplishment of the purposes of the

[61 FR 26677, May 28, 1996, as amended at 62 FR 23163, Apr. 29, 1997; 63 FR 68981, Dec. 14, 1998; 65 FR 59357, Oct. 5, 2000]

§ 101.3 Definitions.

As used in this part:

24 GHz Service. A fixed point-to-point, point-to-multipoint, and multipoint-to-multipoint radio system in the 24.25-24.45 GHz band and in the 25.05-25.25 GHz band consisting of a fixed main (nodal) station and a number of fixed user terminals. This service may encompass any digital fixed service.

Antenna power gain. The ratio of the maximum radiation intensity to that of an isotropic (omnidirectional) radiator in the far field of its main (forward direction) lobe.

Antenna power input. The radio frequency peak or RMS power, as the case may be, supplied to the antenna from the antenna transmission line and its associated impedance matching network.

Antenna structure. The antenna, its supporting structure and anything attached to it.

Assigned frequency. The center of the frequency band assigned to a station.

Assigned frequency bandwidth. The frequency band within which the emission of a station is authorized; the width of the band equals the necessary bandwidth plus twice the absolute value of the frequency tolerance.

Authorized bandwidth. The maximum bandwidth authorized to be used by a station as specified in the station license. (See § 2.202 of this chapter)

Authorized frequency. The frequency, or frequency range, assigned to a station by the Commission and specified in the instrument of authorization.

Authorized power. The maximum power a station is permitted to use. This power is specified by the Commission in the station's authorization.

Automatic Transmitter Power Control (ATPC). ATPC is a feature of a digital microwave radio system that adjusts the transmitter output power. ATPC allows the transmitter to operate at less than maximum power for most of the time. In a radio employing ATPC, the transmit power is reduced during

normal operation conditions. When the receiver detects a reduction in signal level, a control signal is sent to the far end transmitter, instructing it to increase the power output to compensate for the signal reduction. The power output is limited to the licensed (maximum) transmit power. Guidelines for use of ATPC are set forth in the TIA Telecommunications Systems Bulletin TSB 10, "Interference Criteria for Microwave Systems (TSB 10)."

Bandwidth occupied by an emission. The band of frequencies comprising 99 percent of the total radiated power extended to include any discrete frequency on which the power is at least 0.25 percent of the total radiated power.

Bit rate. The rate of transmission of information in binary (two state) form in bits per unit time.

Carrier. In a frequency stabilized system, the sinusoidal component of a modulated wave whose frequency is independent of the modulating wave; or the output of a transmitter when the modulating wave is made zero; or a wave generated at a point in the transmitting system and subsequently modulated by the signal; or a wave generated locally at the receiving terminal which when combined with the side bands in a suitable detector, produces the modulating wave.

Carrier frequency. The output of a transmitter when the modulating wave is made zero.

Central office. A landline termination center used for switching and interconnection of public message communication circuits.

Common carrier fixed point-to-point microwave service. A common carrier public radio service rendered on microwave frequencies by fixed and temporary fixed stations between points that lie within the United States or between points to its possessions or to points in Canada or Mexico.

Communication common carrier. Any person engaged in rendering communication service for hire to the public.

Control point. An operating position at which an operator responsible for the operation of the transmitter is stationed and which is under the control and supervision of the licensee.